



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/510,112

04/11/2005

Vincent Gaud

0608-1008

5065

466 7590 04/22/2009

YOUNG & THOMPSON
209 Madison Street
Suite 500
ALEXANDRIA, VA 22314

EXAMINER

MCCLENDON, SANZA L

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

04/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**SUPPLEMENTAL
Notice of Allowability**

Application No.

10/510,112

Examiner

Sanza L. McClendon

Applicant(s)

GAUD ET AL.

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/27/2008.
2. ☒ The allowed claim(s) is/are 39,40,42-45 and 49-93.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

SUPPLEMENTAL DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert Madsen on April 17, 2009.

The application has been amended as follows:

In claim 39, on page 6 lines 1-2; please delete "(Rp and Rq as defined in claim 3)".

In claim 39, on page 6, lines 20, please delete "as defined in claim 9" and replace in its stead "an aromatic system, monocyclic or polycyclic, carbocyclic or heterocyclic"

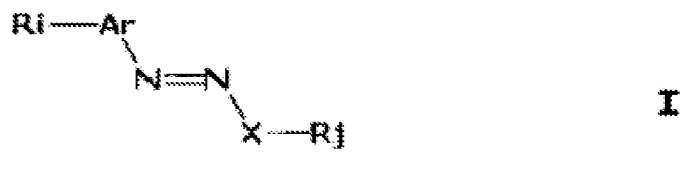
In claim 39, on page 6, line 21, please delete "in claim 9".

In claim 39, on page 7, line 7, please delete "in claim 9".

In claim 76, on page 20, line 13, please delete "in claim 39".

In claim 76, on page 20, line 13, insert after "formula I" the following:

Art Unit: 1796



in which:

- Ar designates an aromatic system, monocyclic or polycyclic,
carbocyclic or heterocyclic,

- X designates an atom chosen from among: C, O, P, S;

Art Unit: 1796

- R_i is one or more of the following groups: hydrogeno, halogeno, alkyl linear or branched, saturated or unsaturated, optionally substituted, aryl aromatic or heteroaromatic, substituted or unsubstituted, alkoxy comprising at least one selected from the group consisting of methoxy, ethoxy, aryloxy, alkylthio, arylthio, benzyl, halogeno, hydroxy, hydroxyalkyl, thiol, alkoxycarbonyl, aryloxy carbonyl, cyano, carbonyl, formyl, amino, carboxylic and sulfonic ester, carboxylic sulfonic and phosphoric amide, carboxylic sulfonic and phosphoric acid, sulfonate, phosphonate, -CONR'R'' group, -OCO-R', -OSO-R', -OPOOH'OR'', -R'NHCOOR'', -R'OCO-R'', -NR'R'' (in which R' and R'' represent an alkyl group, carbocyclic or heterocyclic group, aliphatic, unsaturated, (hetero-)aromatic group, all substituted or unsubstituted, imine whether substituted or not, nitro, -N=N-R', -R_p-Si-(GR_q)₃ group (in which R_p is a hydrocarbon chain or a linear alkyl chain comprising at least 3 C atoms, and R_q denotes a hydrogen atom, a hydroxy group, C₁-C₄ alkoxy chain or - (Si(OR_q)₃ group), vinyl group, acrylic group, alcoxycarbonyl group, and an aryltriazene group,

- R_j designates one or more substituents depending upon the valency of the atom designated by X, the same or different and chosen from among: an alkyl chain linear or branched, saturated or unsaturated, acyclic or cyclic, optionally substituted; an aromatic or heteroaromatic group including, at least one nitrogen or sulfur atom, monocyclic or polycyclic; an alkoxy, aryloxy chain or benzyl group;

Art Unit: 1796

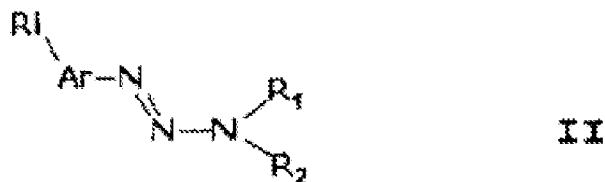
In claim 76, as amended above, please delete the semi-colon (;) in the last line.

In claim 80, on page 21, line 4, please delete "in claim 39"

In claim 80, on page 22, line 12, insert after "type" the following:

“, wherein formula II is defined as,

Art Unit: 1796



in which:

- Ar designates an aromatic system monocyclic or polycyclic, carbocyclic or heterocyclic,
- R₁ is chosen from among the following groups: alkyl linear or branched, saturated or unsaturated, optionally substituted, aryl aromatic or heteroaromatic, substituted or unsubstituted, alkoxy comprising one selected from the group consisting of methoxy, ethoxy, propoxy, alkylthio, arylthio, benzyl, halogens, hydroxy, hydroxyalkyl, thiol, alkyloxycarbonyl, aryloxycarbonyl, cyano, carbonyl, formyl, amino, carboxylic and sulfonic ester, carboxylic sulfonic and phosphoric amide, carboxylic sulfonic and phosphoric acid, sulfonate, phosphonate, -OCONR'R'' group or -OCO₂R', -OSO₂R', -OP(OOR'OR''), -R'NHCOOR'', -R'OCO₂R', -NR'R'' (in which R' and R'' represent as alkyl group, a carbocyclic or heterocyclic group, aliphatic, unsaturated, a (hetero-)aromatic group, all substituted or unsubstituted, imine substituted or unsubstituted, nitro, -N=N-R', -R_p-Si-(OR_q)₃ group (R_p and R_q as previously defined above), a vinyl group, acrylic group, alkoxy carbonyl group, and an aryltriazene group,
- R₁ and R₂ are chosen independently from one another, a -N=N-R' group, -NR'-N=N-R'' group, OH group, NR'R'' group, (R' and R'' have the previously given denotations), an alkyl group comprising at least one selected from the group consisting of methyl, ethyl, propyl,

Art Unit: 1796

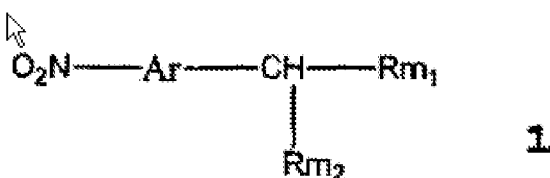
or unsubstituted, diazo $-N=N-R'$, $-R_p-Si(OR_q)_3$ group (R_p and R_q as defined in claim 3), alkylglycidyl ether, alkylvinyl ether, cyclohexyl epoxy,

- R_{31}/R_{32} are independently chosen from among: a hydrogen, an alkyl, alkenyl, alcyanyl, alkylaryl chain, all substituted or unsubstituted, a carbocyclic or heterocyclic chain saturated or unsaturated, aromatic or heteroaromatic, substituted or unsubstituted, an alkoxy, aryloxy, alkylthio, arylthio chain, an alkoxycarbonyl group, $-NR'COR''$ group, $-CCOR'$ group, $-OCCOR'$ group, $-OCCNR'R''$ group, $NR'COOR''$ group, $-CFCOR'R'R''$ group, $-OSOR'$ group, $-OFCOR'OR''$ group, $-NR'R''$, $-COOR'$ group, $-CONR'R''$, $SOOR'$, $-COR'$ group (R' , R'' and R''' have the previously indicated denotations for R' and R''), an imine group substituted or unsubstituted, a hydroxy, thiol group, a carboxylic acid or derivative of carboxylic acid, a halogen, a nitrile, an alkyl(C1-C6)glycidyl ether group, alkyl(C1-C6)vinyl ether group, cyclohexyl epoxy, $-R_p-Si(OR_q)_3$ group (R_p and R_q as previously defined above)

In claim 90, on page 26, lines 12-13, please delete "in claim 39".

In claim 90, on page 26, line 13, please insert after "formula 1" the following:

Art Unit: 1796



In which:

- Ar designates an aromatic or heteroaromatic radical monocyclic or polycyclic and carrying at least one R_k substituent,
- R_k designates an auxochromic or bathochromic substituent which may be chosen from the following examples: hydrogen, halogen, alkyl chain, aliphatic acyclic saturated or unsaturated, linear or branched, a cyclic, aliphatic, unsaturated, aromatic or heteroaromatic radical, these chains and radicals possibly being substituted, interrupted or terminated by a heteroatom comprising at least one selected from the group consisting of B, N, O, Si, P, S and a halogen, a nitro group, cyano group, an alkoxy, aryloxy, alkylthio, arylthio, benzyl, alylalkyl, hydroxy, thiol, alkoxycarbonyl, aryloxycarbonyl, carbonyl, formyl, amino radical, carboxylic ester, amide, sulfonic ester, sulfonic amide, carboxylic acid, sulfonic acid, sulfonate, phosphonate, a -OCONR'R'' group, -OCO₂R', -OSO₂R', -OPCO₂R'OR'', -R'NECO₂R'', R'OCO₂R'', NR'R'' (R' and R'' are an alkyl, aryl group, a carbocyclic or heterocyclic group), imine substituted

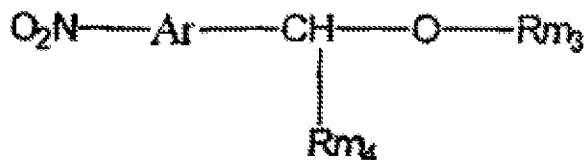
Art Unit: 1796

or unsubstituted, diazo -N=N-R', -Rp-Si(ORq)₃ group (Rp and Rq as defined in claim 3), alkylglycidyl ether, alkylvinyl ether, cyclohexyl epoxy,

- R_m/R_n are independently chosen from among: a hydrogen, an alkyl, alkenyl, alcyanyl, alkylaryl chain, all substituted or unsubstituted, a carbocyclic or heterocyclic chain saturated or unsaturated, aromatic or heteroaromatic, substituted or unsubstituted, an alkoxy, aryloxy, alkylthio, arylthio chain, an alkylloxycarbonyl group, -NR'COR' group, -OOR' group, -OCOOR' group, -OCONR'R' group, NR'COOR' group, -OPOR'R'R' group, -OSOR' group, -OPOOR'OR' group, -NR'R', -COOR' group, -CONR'R', SOOR', -COR' group (R', R' and R' have the previously indicated denotations for R' and R'), an imine group substituted or unsubstituted, a hydroxy, thiol group, a carboxylic acid or derivative of carboxylic acid, a halogen, a nitrile, an alkyl(C1-C6)glycidyl ether group, alkyl(C1-C6)vinyl ether group, cyclohexyl epoxy, -Rp-Si-(ORq)₃ group (Rp and Rq as previously defined above)

In claim 91, on page 27, lines 8-9, please delete "in claim 39"

In claim 91, on page 27, line 9, please insert after the word "formula 2" the following:



2

in which:

- Ar is as defined in claim 9,
- R_{m3} is defined as Rm1/Rm2 in claim 9,
- R_{m4} is chosen from among a hydrogen, an alkyl, alkenyl,

alcynyl, alkylaryl chain, all substituted or unsubstituted,
interrupted by a heteroatom, a carbocyclic or heterocyclic chain,
saturated or unsaturated, aromatic or heteroaromatic, substituted or
unsubstituted, an alkyloxycarbonyl group, NCOOR' group, -PCR'R''R'''
group, -SO₂R' group, -POCR'OR'' group, -COOR' group, -CONR'R'', COR'
group (R', R'' and R''' having the previously indicated denotations
for R' and R'' in claim 9), an alkyl(C₁-C₆)glycidyl ether group,
alkyl(C₁-C₆)vinyl ether group, cyclohexyl epoxy, -Rp-Si(ORq)₃ group
(Rp and Rq as previously defined above),

In claim 91, as amended above in line 4, please delete "as defined in claim 9" and replace with "an aromatic system, monocyclic or polycyclic, carbocyclic or heterocyclic".

In claim 92, on page 31 lines 2-3, please delete "(Rp and Rq as defined in claim 3)" and replace with "(Rp and Rq as previously defined)".

In claim 92, on page 31, lines 22, please delete "as defined in claim 9" and replace with "an aromatic system, monocyclic or polycyclic, carbocyclic or heterocyclic".

In claim 92, on page 31, line 23, please delete "in claim 9".

Allowable Subject Matter

2. Claims 39-40, 42-45, and 49-93 are allowed.
3. The following is an examiner's statement of reasons for allowance: The prior art, alone or in combination, fails to expressly teach and/or fairly suggest a photosensitive adhesive composition obtained by polymerization and/or crosslinking, wherein said adhesive comprises bifunctional monomers having photocleavable center units defined by the instant formula (I), (II), (1), (2), (3) and (4) as found in instant claim 39. Additionally, the prior art, alone or in combination, fails to teach a bifunctional monomer as defined in claims 76-79. The prior art, alone or in combination, fails to teach methods for preparing bifunctional monomers including a photo-cleavable center comprising at least one photo-cleavable unit and at least two polymerizable units linked by covalent skeleton to said photo-cleavable center as defined in claims 80-82, 84-86, and 92.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1796

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sanza L McClendon/

Primary Examiner, Art Unit 1796

SMc